

CLAIMS

1. A call controller, comprising:

a processor configured to monitor call signaling for a media call between a first and second endpoint and dynamically determine when to insert a media proxy into a call path associated with the call signaling according to a network proximity between the first and second endpoints.

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2. The call controller according to claim 1 wherein the processor is configured to determine whether or not to insert the media proxy into the call path only when the first endpoint is identified as not supporting a quality of service reservation protocol.

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3. The call controller according to claim 1 wherein the processor causes the media proxy to conduct a quality of service reservation for the call path when the first and second endpoints are within a given network proximity range and the processor causes the call path to be established without the media proxy and without conducting a quality of service reservation when the first and second endpoints are outside the given network proximity range.

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4. The call controller according to claim 1 wherein the processor determines the network proximity by applying Internet Protocol (IP) addresses for the first and second endpoints to a subnet mask.

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5. The call controller according to claim 4 wherein the processor receives the subnet mask in the monitored call signaling, the processor not inserting the media proxy into

the call path when the first and second endpoints have a same subnet address and inserting the media proxy into the media path when the first and second endpoints do not have the same subnet address.

5 6. The call controller according to claim 4 wherein the processor requests the subnet mask from an IP address assignment server.

7. The call controller according to claim 1 wherein the processor generates a routing metric value by applying Internet Protocol (IP) addresses for the first and second
10 endpoints to a routing map and uses the routing metric value to determine the network proximity between the first and second endpoints.

8. The call controller according to claim 7 wherein the processor operates as a passive router protocol receiving routing messages and using the received routing messages
15 to update the routing map without ever using the routing map to route IP packets.

9. The call controller according to claim 8 wherein the processor inserts the media proxy into the call path when the metric value is above a predetermined policy value and does not insert the media proxy into the call path when the metric value is below the
20 predetermined policy value.

10. A network device, comprising:

a first endpoint sending call signaling that causes quality of service reservation for a media path between the first endpoint and a second endpoint according to a network proximity of the first endpoint with the second endpoint.

5 11. The network device according to claim 10 wherein the call signaling causes a media proxy to be inserted in the media path for performing the quality of service reservation according to the network proximity of the first and second endpoints.

10 12. The network device according to claim 10 wherein the first endpoint sends a subnet mask along in the call signaling that is used to determine the network proximity between the first and second endpoints.

15 13. The network device according to claim 10 wherein the quality of service reservation is not performed when the first and second endpoints have a same subnet address and the quality of service reservation is performed when the first and second endpoints have different subnet addresses.

20 14. The network device according to claim 10 wherein the quality of service reservation is performed according to a routing protocol metric generated from Internet Protocol (IP) addresses associated with the first and second endpoints.

15. A method for establishing a media stream over a packet switched network, comprising:

dynamically deciding whether to insert a Quality of Service (QoS) intermediary into a media session between two endpoints according to a relative proximity of the two endpoints in the packet switched network.

5 16. The method according to claim 15 including inserting the intermediary into the media session according to subnet addresses associated with the two endpoints.

 17. The method according to claim 16 including:
 identifying a range of subnet addresses; and
10 inserting the intermediary into the media session when the subnet addresses associated with the two endpoints are within the identified subnet address range.

 18. The method according to claim 15 including inserting the intermediary into the media session according to a routing metric associated with the two endpoints.

15 19. The method according to claim 17 including:
 passively listening for routing messages sent over the packet switched network;
 using the routing messages to update a routing map;
 using an Internet Protocol (IP) address for a first one of the endpoints as a local IP
20 address associated with the routing map;
 generating the routing metric associated with a shortest path between the first and second endpoints by applying an IP address for a second one of the endpoints to the routing map; and

inserting the QoS intermediary into the media path according to the generated routing metric.

20. A system for establishing a media stream over a packet switched network,
5 comprising:

means for dynamically deciding whether to insert a Quality of Service (QoS) intermediary into a media session between two endpoints according to a relative proximity of the two endpoints in the packet switched network.

10 21. The system according to claim 20 including means for inserting the intermediary into the media session according to subnet addresses associated with the two endpoints.

22. The system according to claim 21 including:
15 means for identifying a range of subnet addresses; and
means for inserting the intermediary into the media session when the subnet addresses associated with the two endpoints are within the identified subnet address range.

23. The system according to claim 20 including means for inserting the
20 intermediary into the media session according to a routing metric associated with the two endpoints.

24. The system according to claim 22 including:

means for passively listening for routing messages sent over the packet switched network;

means for using the routing messages to update a routing map;

means for using an Internet Protocol (IP) address for a first one of the endpoints as a
5 local IP address associated with the routing map;

means for generating the routing metric associated with a shortest path between the first and second endpoints by applying an IP address for a second one of the endpoints to the routing map; and

means for inserting the QoS intermediary into the media path according to the
10 generated routing metric.

25. An electronic storage medium containing software for establishing a media stream over a packet switched network, the electronic storage medium comprising:

dynamically deciding whether to insert a Quality of Service (QoS) intermediary into a
15 media session between two endpoints according to a relative proximity of the two endpoints in the packet switched network.

26. The electronic storage medium according to claim 25 including inserting the intermediary into the media session according to subnet addresses associated with the two
20 endpoints.

27. The electronic storage medium according to claim 26 including:
identifying a range of subnet addresses; and

inserting the intermediary into the media session when the subnet addresses associated with the two endpoints are within the identified subnet address range.

28. The electronic storage medium according to claim 25 including inserting the
5 intermediary into the media session according to a routing metric associated with the two endpoints.

29. The electronic storage medium according to claim 27 including:
passively listening for routing messages sent over the packet switched network;
10 using the routing messages to update a routing map;
using an Internet Protocol (IP) address for a first one of the endpoints as a local IP address associated with the routing map;
generating the routing metric associated with a shortest path between the first and second endpoints by applying an IP address for a second one of the endpoints to the routing
15 map; and
inserting the QoS intermediary into the media path according to the generated routing metric.